

## ABSTRACT

5       A method for production of an  $\alpha$ -glucan from a  $\beta$ -1,4-glucan is provided, comprising: reacting a solution containing  $\beta$ -1,4-glucan, a primer, a source of phosphoric acid,  $\beta$ -1,4-glucan phosphorylase, and  $\alpha$ -1,4-glucan phosphorylase to produce an  $\alpha$ -glucan. In this method, said  $\beta$ -1,4-glucan may be cellobiose, and said  $\beta$ -1,4-glucan phosphorylase may be cellobiose phosphorylase.